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1 Routine/Function Prologues

1.0.1 noah_almaout.F90 (Source File: noah_almaout.F90)

LIS NOAH data writer: Binary and stat files in ALMA convention

REVISION HISTORY:

```
4 Nov. 1999: Jon Radakovich; Initial Code
28 Apr. 2002: Kristi Arsenault; Added NOAH LSM to LDAS
15 Jun 2003: Sujay Kumar; ALMA version
```

INTERFACE:

```
subroutine noah_almaout
```

USES:

```
use lisdrv_module, only : lis
use netcdf
use grid_module      ! LIS non-model-specific grid variables
use noah_varder     ! NOAH-specific variables

implicit none
```

ARGUMENTS:

CONTENTS:

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!-----
! Test to see if output writing interval has been reached
!-----
if(mod(lis%t%gmt,noahdrv%writeintn).eq.0)then
    noahdrv%numoutnh=noahdrv%numoutnh+1
    write(unit=temp1,fmt='(i4,i2,i2)')lis%t%yr,lis%t%mo,lis%t%da
    read(unit=temp1,fmt='(8a1)') ftime
    do i=1,8
        if(ftime(i).eq.(' '))ftime(i)='0'
    enddo
    write(unit=temp1,fmt='(i4)')lis%t%yr
    read(unit=temp1,fmt='(8a1)')ftimec
    do i=1,4
        if(ftimec(i).eq.(' '))ftimec(i)='0'
    enddo
#if 0
    write(unit=temp1,fmt='(a6,i3,a1)') '/LIS.E',lis%o%expcode,'.'
    read(unit=temp1,fmt='(80a1)') (fname(i),i=1,10)
    do i=1,10
        if(fname(i).eq.(' '))fname(i)='0'
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        enddo
#endifif
        write(unit=temp1,fmt='(a40)') lis%o%odir
        read(unit=temp1,fmt='(40a1)') (fbase(i),i=1,40)
        c=0
        do i=1,40
            if(fbase(i).eq.( ' ) .and. c.eq.0)c=i-1
        enddo

        write(unit=temp1,fmt='(a4,i3,a6,i4,a1,i4,i2,i2)')'/EXP', &
            lis%o%expcode,'/NOAH/', &
            lis%t%yr,'/',lis%t%yr,lis%t%mo,lis%t%da
        read(unit=temp1,fmt='(80a1)') (fyrmadir(i),i=1,26)
        do i=1,26
            if(fyrmadir(i).eq.( ' ))fyrmadir(i)='0'
        enddo

        write(unit=temp1,fmt='(a9)')'mkdir -p '
        read(unit=temp1,fmt='(80a1)')(fmkdir(i),i=1,9)

        write(unit=temp1,fmt='(80a1)')(fmkdir(i),i=1,9),(fbase(i),i=1,c), &
            (fyrmadir(i),i=1,26)
        read(unit=temp1,fmt='(a80)')mkfyrmo
        call system(mkfyrmo)
!-----
! Generate file name for BINARY output
!-----
        write(unit=fbinname, fmt='(i4,i2,i2,i2)') lis%t%yr,lis%t%mo, &
            lis%t%da,lis%t%hr
        read(unit=fbinname,fmt='(10a1)') ftimeb
        do i=1,10
            if(ftimeb(i).eq.( ' ))ftimeb(i)='0'
        enddo
        if(lis%o%wout.eq.1) then
            write(unit=fbinname,fmt='(a9)') '.gs4r      ,
            read(unit=fbinname,fmt='(80a1)') (fsubgb(i),i=1,9)
        elseif(lis%o%wout.eq.2) then
            write(unit=fbinname,fmt='(a9)') '.NOAH.grb'
            read(unit=fbinname,fmt='(80a1)') (fsubgb(i),i=1,9)
        elseif(lis%o%wout.eq.3) then
            write(unit=fbinname,fmt='(a9)') '.NOAH.nc '
            read(unit=fbinname,fmt='(80a1)') (fsubgb(i),i=1,9)
        endif
#endifif 0
        write(unit=fbinname,fmt='(80a1)')(fbase(i),i=1,c), &
            (fyrmadir(i),i=1,26), &
            (fname(i),i=1,10),(ftimeb(i),i=1,10), &
            (fsubgb(i),i=1,9)

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    read(unit=fbinname,fmt='(a80)')filengb
#endif
    write(unit=fbinname,fmt='(73a1)')(fbase(i),i=1,c), &
        (fyrmadir(i),i=1,26),'/',&
        (ftimeb(i),i=1,10), &
        (fsubgb(i),i=1,9)
    read(unit=fbinname,fmt='(a73)')filengb
!-----
! Open statistical output file
!-----
if(noahdrv%noahopen.eq.0)then
    file='Noahstats.dat'
    call openfile(name,lis%o%odir,lis%o%expcode,file)
    if(lis%o%startcode.eq.1)then
        open(65,file=name,form='formatted',status='unknown', &
            position='append')
    else
        open(65,file=name,form='formatted',status='replace')
    endif
    noahdrv%noahopen=1
endif

    write(65,996)'      Statistical Summary of Noah output for: ', &
        lis%t%mo,'/',lis%t%da,'/',lis%t%yr,lis%t%hr,:',lis%t%mn,:',lis%t%ss
996  format(a47,i2,a1,i2,a1,i4,1x,i2,a1,i2,a1,i2)
    write(65,*)
    write(65,997)
997  format(t27,'Mean',t41,'Stdev',t56,'Min',t70,'Max')
    ftn = 58
    if(lis%o%wout.eq.1) then
        open(ftn,file=filengb,form='unformatted')
        call noah_binout(ftn)
        close(58)
    elseif(lis%o%wout.eq.2) then
        call baopen (ftn,filengb, iret)
        call noah_gribout(ftn)
        call baclose(ftn,iret)
    elseif(lis%o%wout.eq.3) then !netcdf
        iret = nf90_create(path=trim(filengb),cmode=nf90_clobber,ncid=ftn)
        call noah_netcdfout(ftn)
        iret = nf90_close(ftn)
    endif
    call noah_writestats(65)
    noah%count=0 !reset counters
    write(65,*)
    write(65,*)
endif

```